

Sall (-6596)

-6597 GTGACCTGC AGGTCAACGG ATCACTTCAG GACAGTAGTT CAAGACCAGC CTGGGACGCA TAGGAGAGCT GTCTCTACGA AAAATCAAAA AATTATGGCC
-6497 GGGCATGGTG GCTCAGTCT GTAATCCCTG AACTTTGGGA CATCAAGGCA AGTGGATCAC TTGAGGTTCAG GAGTTCGAGA CTAGCTGGC CAACATGGTG
-6397 AAACCTATC TCCACTAAA AATACAAAAA TTAGCCAGGC GATCACACCA CTGCACTCCA GCTGGGTGA CAGAGCAAGA CTCTATCTCA AAAAAATAA AAAAAATAAA
-6297 ACCCAGGAG CCGAGGTTC AGTGAGCTGA TAGTCTCAG GCAACAGAGA GAGACCTGT CTCTAAAAA ATATAATAA TAAAGAAAA AACAGCTCTG TTTATGCTC
-6197 AATTAGCCA GGCATGGTAG TCCACACCTC TCCAGCCTGG TTTGCAACTC ATATCACTGA TTTTATATAG TTTTATATAG ACATCGAGAT TTGAATTTCA TATGATTTT ACATTTTATA
-6097 CCAAGATCAT GCCACTACAC TCCAGCCTGG TGTATATAGT AAAAGCAGT AAAACAATA ATAAACAATA TTTTAAAG TTTTAAAG TTTTAAAG TTTTAAAG TTTTAAAG
-5997 CTGGCTCATA CATACTACTA TGTATATAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT
-5897 CTGGCTCATA CATACTACTA TGTATATAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT
-5797 AATATATCTT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT TTTTAAAGT
-5697 GGTGGGAGA TCACCTTGAGA TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC
-5597 TGCACACCTG TGATCCACAG TCATTTGGAG TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC
-5497 CCAGCCTGGG TGACAGAGTG AGACTTCGTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC TCAACAGTTC
-5397 TACTCCTGCT CTGAGGCATA CCTGAGAGT GCAACAAATG GCAACAAATG GCAACAAATG GCAACAAATG GCAACAAATG GCAACAAATG GCAACAAATG GCAACAAATG
-5297 GTTTTTTTTT TACAATCTAC AAGCTGCCAG CCCCCTCTAA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA
-5197 GTGGAGGGG AAGCTGCCAG CCCCCTCTAA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA CCAATGAAGA
-5097 CCCCCTCTAG ATCACTGTGA CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC CTCTGAGCC
-4997 TCTCCCCATG TGGGGCTGAA GTCTGGATTG AGCCGTTATT CAAGATGTAC AGCTTCTTTC AGCTTCTTTC AGCTTCTTTC AGCTTCTTTC AGCTTCTTTC AGCTTCTTTC
-4897 GATGATCTAA CTGCAATCC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC TACCTGGCTC
-4797 CACCAGTTGG TTGACAGGAT GAAATGACGA AGTCCCTTAC ACCTGTAATC CCAGCACITT CCAGCACITT CCAGCACITT CCAGCACITT CCAGCACITT CCAGCACITT

SphI (-4693)

-4697 ACAGCATGCC GGCAGTCTC ACAGCCCTCG TTCGCTCTCG GCGCCCTCTC TGCCCTGGGT CCCACTTCGG TGGCACTTGA GGAGCCCTTC AGCCACCCG
-4597 TGCATCTGG GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT GAGCCCTCTT
-4497 GCGCACGGG CTTGGGGGC AGCTGGAGTT CCGGGTGGG GTGGGCTTGG CCGGCCCCCG ACTCGAGCA GCGGCCAGC CCTGCCAGC CCGGGCAAT

SmaI (-4406)

FIG. 3A

-4397 GAGAGGCTTA GCACCCGGG CAGCGCTGC GGAGGTGTA CTGGGTGCC CAGCAGTGC AGCCCGCCG CGCTGTGCTC GCTCGATTTC TCACTGGGCC
 -4297 TTAGCAGCTT TCCCGGGGG CAGGCTCGG GACCTGCAG GACCTGCAG CCGCCATGCC TGAGCCTCC CTCCATGGG TCCTGTGCG CCCGAGCCTC CCGCAGCAGC
 -4197 ACCACCCCTT GCTCCACAG GCCAGTCCC GCGAGTCCG ATCGACCAAG CCAAGGCTGA GAAGTGGGG CCGACGGCAC CGGACTGGC AGGAGCTAC CCCTGCAGCC
 -4097 CTGGTGGGA ATCCACTGGG TGAAGCCAGC TGGGCTCCTG AGTCTGGTG AGACTGGAG AACCTTTATG TCTAGCTCAG GATCGTAAA TACACCAATC
 -3997 AGCACCCCTG GTCTAGCTCA GGTCTGTGA ATGCACCAAT ATGCACCAAT CTCTGATGG GCCTTGGAGA ACCTTTATGT CTAGCTCAGG
 -3897 GATTGTAAAT ACACCAATCG GCACCTCTGA TCTAGCTCAA GGTGTGAAA CACACCAATC AGCACCCCTG GTCTAGCTCA GGTATGTGA ATGCACCAAT
 HindIII (-3722)
 -3797 CGACAGTCTG TATCTGGCTA CTTTCATGG CATCCGTGTG AAGAGACAC CAACACGGCT TTGTGTGAGC AATAAAGCTT CTATCACCTG GGTGCAGGTG
 -3697 GGCTGAGTCC GAAAGAGAG TCAGCGAAG AGATAAGGGT GGGCCGTTT TATAGGATT TATAGGTAA GGTAGGTAA AGGAAATTA CAGTCAAAAG GGTGTGTTT
 -3597 TCTGGCCGG CAGGAGTGG GGTGCGAAG GTGCTCAGT GTGAGCCAG ATGAGCCAG TTGAGCCAGG AAGAGACTT TCACAAGGTG ATGTCATCAA
 -3497 TTAAGGCAAG GACCCGCCAT TTACACCTCT TTTGTGGTG AATGTCATCA GTTAAGTTT GGGCAGGGC ATATTCACTT CTTTGTGAT TCTTCAGTTA
 -3397 CTTCAGGCCA TCTGGCGGTA TATGTGCAAG TATGAGGGA TTACAGGGGA TGCGATGGCT TGGCTTGGC TCAGAGGCTT GACAGCTACT CTGGTGGGC CTTGGAGAAT
 Sall (-3290)
 -3297 GTTGTGTGTC ACCTCTGTA TCTAGTTAAT CTAGTGGGA CGTGAGAAC CTTTGTGCT AGCTCAGGA TTGTAACGC ACCAATCAGC GCCCTGTCAA
 -3197 AACAGACCAC TCGGCTCTAC CAATCAGCAG GATGTGGTG GGGCCAGTA AGAGAATAA AGCAGGCTGC CCGAGCCAGC AGTGGCAACC GCACAGGTCC
 -3097 CTATCCACAA TATGGCAGCT TTGTCTTTT GCTGTTTGG ATAAATCTG CTAATCTCTG CCGAGGAAAT GAACAACCTC CTTTATGAGT TTAACACTCA
 -2997 CCACGAAGGT CTGCACTTC ACTCCTGAG CCCTTAAGC CCAGGCCCA CACGAACCA CCGAGGAAAT CCGAACTGCA ACATCAGAG CTTTAAAGAGC GAAACAAACTC
 -2897 ACCGCGAAGG TCTGCACTT ACCTTAAGAG CTGTAACACT CACTGCGAGG GTCCCGGCT TCTTCTTGA AGTCACTGAG ACCAAGCACT CACCAGTTTC GGACACAAGC
 -2797 CAGATGCACC ACCTTAAGAG CTGTAACACT CACTGCGAGG GTCCCGGCT TCTTCTTGA AGTCACTGAG ACCAAGCACT CACCAGTTTC GGACACAAGC
 -2697 CCAGGAGTTT GAGATCAGC TGCGCAACAT GATGAATGC CCTCTCTGA AAAAATAA AAATTACAA AATTGGCGG GTCTGGTGGT CCGTGGCTGT
 -2597 GGTCCAGCT ACGCGGAGG TAAAGTTGG AGGATCGCT GAGCCTGGG GGTGAAGCT GCAGTGAAGT GTGATTGTAC CACAGCCCTC TAGGCTGGGG
 -2497 GACAGACTGA GACCCCTGTT CCCCCTCCGA AAAAATGTA CAAAGTGTG ATAAAGGTTG CCTGATATGG CTAGGTGCG TGGCTCATGC CTGTAATCCC
 -2397 AGCACTTTGG GAAGCCGAGG CCGCGGGGTC ACCTAAGGTC AGGAGTGTGA GACCAGCCTG GCCAACATGG AGAAAGCCCA TCTCTTCTAA AAATACAAAA
 SphI (-2269)
 -2297 TTAGCCGGCT GTGGGGGCG TGCTGGACA TGCTGTATAT CCCAGCTACT CAGGAGGCTG AGCGAGGAGA ATCATTGAA CCCAGGAGG GCGGTGTGCA
 -2197 GTAGCCGAG ATCGTCCCAT TGCACTCCAC CCCTCCCAT CTGGGCAACA AGAGCCAAAC TCTGTCTTAA AAAAAAAA AAAGTCCCTG ACATATAAGA
 -2097 GGTGTGCAAT GCATAGTTGC CAGGCAACAT GTTTAAGAA GTGGAGCTCC TGCCCTCCAT GGTCCTGTTA AAAACCCACC CTCAGGCCA GGTGCAGTGG
 -1997 CTATGCTTA TAATCCAGC ACTTTGGGAG GCGGAGGCG GTGATCAAC TGAGGTGAG AGTTCGAGAC CAGCCTGACC ACCAACATGG TGAATCCCA

FIG. 3B

SphI (-1858)

-1897 CCTCTACTAA AAATACAAA TTAGATGAGC ATGGTGTGTC ATGCTGTAA TCCACCTAC TGGAGGCTG AGCAGGAA- ATCACTAGAA CCAGGAGGC
-1797 GGAGGTTGTA GTGAGCCGAG ATCGTGCCAT TCCACTCCAG CCTGAGCAAT GAGCGAACT CCATCTCAA AAAACAA- CAAAACCA CTCTCTACTC
-1697 CAGGAGCTG GGTACAGAGC TGGGCCACAT CAGTCCAAG TCGTGAGCCA CAGAGCTAAG GCGACGTGA GGACCGGA CCAGATAACA GTGTGTGAGA
-1597 TCAGTGTGTG AGATCAGAGC TCCCTGCCAT TCGTGAGCC CAGGGGCC CCAAGCACA GAGATGCCC CATCCAGTCA CCACATCCAC TTCTCATCCA
-1497 GAGATGCTG TTCTTTGGCA CCTTGGGTA AATTAGGACA GAAGGTGACA GTCTTGGTG TGGTCAGTCA GACTGCCCC GGCAGGCC TTGTCTGTAG
-1397 AAAAGTTCA GGCCTAGGC CGCTAGGC CGAGTGGCT CAGGCTGTA ATCCAGCAC TTITGGAGC CGAGCGGT GGCAGGAGT GTCAGGAGT CGTGACCATC
-1297 CTGGCTAACA CCGTGAAEC CCGTCTCTAC TAAAAATACA AAAAATTGGC CGGCATGCT TCCAGGACC TGTAAGTCCA GCTACTCGG AGGCTGAGGC
-1197 AGGAGATGG GTGAACCCGA GAGGCAGAT TTGCAGTGA CCGAGATCG GCCACTGCA CTTTGGCAA GGCCTTCTT TCCCTGGCCA GTTCACGGG
-1097 AAAAGAAAC GTTCAGGTCT GAGCCAGAG CCGAGGCTGT AATCTGTCA CTTTGGCAA TGGGCAAGT TCCCTCTCT CACCCAGCC CGTGTCCACT
-997 TTGGAATCGA CTCCAAGGTC CCTTCCAGCA TTAACGCTGC ATGGTTCTAA GGCCTTGGGA CCTACTGTC AGGTGCTGC ACAGGAGGT GAAGTTCAGG
-897 TCAAGGTGAA TGACCAGGGA AGTCACGTGT CCAATCCCG CAGTTCCAAA TTCTCTTGGC TCTACCGAT TCTAGGCTT TGCCGAATG AGTCATGGG
-797 TGAGCCAAATC GCTCGAAGG GTCTTGCTC ATTCGGGACA GACATCCGCT TGAACCTTGG GAACTTTCG ATGGTGGC TCCAAAGTGT GGTGCGCAC AGCAGCCAAG
-697 GCGGGGGTT TCTGGGGAGT TCCAGCTAA TCAACTTGG TCAAGTGTG ATGGTGGCTA TCCAAAGTGT GGTGCGCAC AGCAGCCAAG
-597 ACCCAATGTC CTTATCTCAG GTAGGGGCTC AGGAGGCTC CCAGACAGC AGCTTCCGA GAGTTGGG GTAGGAATGG GAGCAACCAG GCTTCTTTTT
-497 TTCTCTCTTA GAATTGGG GCTTGGGGA CAGGCTTGA AATCCAAAG GAGAGGGGA AAGGACACTC CCCCACAAG CTGCCAGAGC GAGAGAGGA

SfiI (-297)

-397 GACCCCGACT CAGCTGCCAC TTCCCCACAG GCCTCTGCCG CTTCCAGGCG TCTATCAGCG GCTCAGCCTT TGTTCAGCTG TTCTGTTCAA ACACCTCTGG
-297 GCAATTCAGG CTTGGGTGGG GCAGCGGAGT GAAGGAGTGT TGAGGGGGGC AAGCGGACGT CAAAGGAGGA TCAGAGATTC CACAATTCA CAAAACCTTC
-197 GCAACAGCT TTTTGTCCA ACCCCCTGC ATTGTCTTGG ACACCAAAAT TGCATAAATC CTGGGAAGT ATTACTAAGC CTTAGTCTGT GCCCCAGGTA

ATG (1)

-97 ATTTCTCTCC AGGCTCCAT GGGTTATGT ATAAAGGGCC CCTAGAGCT GGGCCGCCAA ACAGCCCGA GCTTCAGCC CAGGCCACC CAGACCCATG
1 Met

TATA box (-67)

intron 1 (41)

4 GCTGGACCTG CCACCCAGAG CCCATGAAG CTGATGGGTG AGTGTCTTGG CCCAGGATG (SEQ ID NO: 1)

2 A1aGlyProA l aThrGlnSe rProMetLys LeuMet (SEQ ID NO: 2)

FIG. 3C

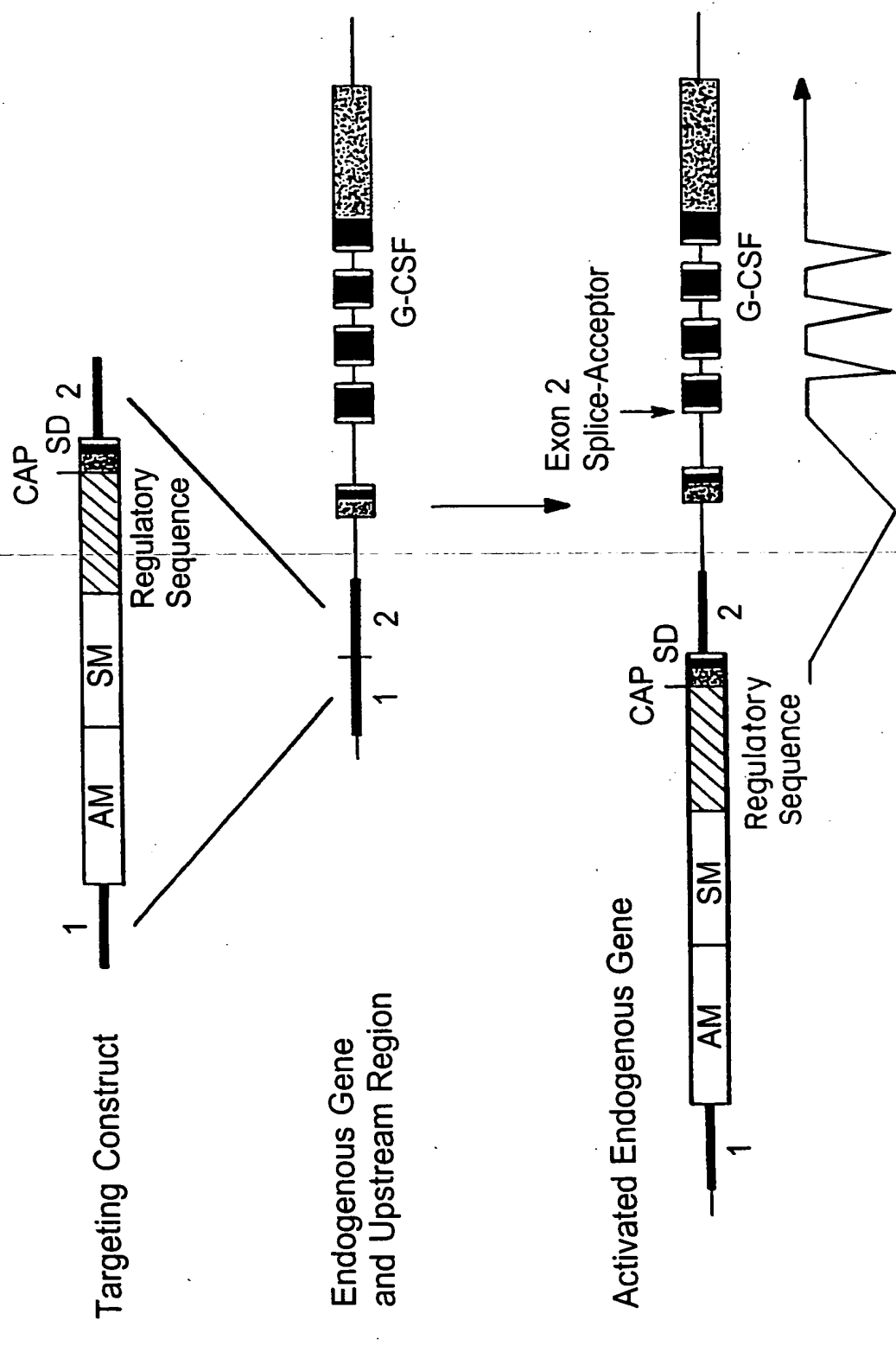


FIG. 4

GATCACTTGAGGACAGTAGTTCAAGACCAGCCTGGGCAGCATAGGGAGACTGTCTCTACGAAAAA
 TCAAAAAAATTATGGCCGGGCATGGTGGCTCACGTCTGTAATCCCTGAACTTTGGGACATCAAGGC
 AAGTGGATCACTTGAGGTCAGGAGTTCGAGACTAGCCTGGCCAACATGGTGAAACCCTATCTCCA
 CTAAAAAATACAAAAATTAGCCAGGCATGGTGGCAGGCACCTGTAATCCCGGCTACTCAGGAGGC
 TGAGGCAGGAGAATCACTTGAACCCAGGAGGCGGAGGTTGCAGTGAGCTGAGATCACACCACTGC
 ACTCCAGCCTGGGTGACAGAGCAAGACTCTATCTCAAAAAAATAAAAAAATAAAAAAATTAGCC
 AGGCATGGTAGTGACACACCTCTAGTCTCAGCTACTCAGGAGGCTGAGGTGGGAGGATCACTTGAA
 CCTGGGGCAGTCAAGGCTACAGTGAGCCAAGATCATGCCACTACACTCCAGCCTGGGCAACAGAG
 AGAGACCCTGTCTCTAAAAAATAATAATAATAAAGAAAAAACAAGCTCTGTTTATGTCTCCTGG
 TCCATACATACTACTATGTATATAGTTTGCAAACTCAAAGATCCAGATAGTCAATTTTTTAGGCT
 TGTGGGCGGTATGGTCTCTGTCACAATCACTCTGCCCTGTCTTTCTAGCACAAAGCAGCTATAA
 ACAATACATACATGAATTTTTTATAGACATCGAGATTTGAATTTTATATGATTTTTTACATTTTAT
 AAAATAATCTTTTTTAAAAATTTTCCCCTAACCATTTAAAAAGTGTAAGCCGGCCAGGGCGCCAT
 CGTCACGCCTGTAATTCAGCACTTTGGGAGGCTGAGGTGGGCAGATCACTTGAGATCAACAGTT
 CGAGACCAGCCTGGCCAACATAGCAAAACCCCATTTCTACTAAAAAATAAAAAAATTAGCTGGGCA
 TAGTGGTGACACCTGTGATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGG
 GAAGCGGAGGTTGCAGTGAGCCAACATCATGCCACTGCACTCCAGCCTGGGTGACAGAGTGAGAC
 TTCGTCTCAACGAAAAAAAAAAGTGTAAGCCATTCCCTAATTCAGTGTAATCAGTGATACATAC
 TEAGGTCTGCGTACTCCTGCTCTGAGGCATACCTGAGAAGTAGAGTTGCTTGGTCACAGGACATA
 CACATTTCCACATTAAGTAGACTACCAAGTTGCCATCCAAGGAGGTTTTTTTTTTTACAATCTA
 CACTCCCCCAGCAACAAATGAGAGTTACTCCAGATCCTTTACAAAGATGCTCTAAGCCCAGTAC
 CAGATGAAAAAGGAAGTGGGAGGGGAAGCTGCCAGCCCTTCTAACCATGAAGAAATACCTGGT
 AGAGCCTTCTGGATGCTGGAAGGATGAATAACGGGGGTCTCTGGAGCCTGCCCCCTGTGAGTCA
 CTGTGACTTCTGAGCCTCCAGTCCAGTCTCAGCCCCATGTGTGATGGCCAGTGATAATGAGCCCT
 CACTCTCTGTTTGGTCTTTATTCTCCCCATGTGGGGCTGAAGTCTGGATTGAGCCGTTATTCAAG
 ATGTACAGCTTTCTTGACAGGAAAGTAGTGTACAGAAACAGCAGGGGCTTGGCAAGATGATCTA
 ACTGCAAATCCTACCTGGCTCAGCCACCAGCTAGTTCTGTGATCTTGAACAAGTTTTTTTCACTTC
 TCTGAGGCCATCCCTTGGCTACAACACACCAGTTGGTTGACAGGATGAAATGACGAAGTCCCTTA
 CACCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGTGGATGGCTTGAGCCTGAGAGGTGACAG
 CATGCCCGCAGTCCCTCACAGCCCTCGTTGCTCTCGGCGCCTCCTCTGCCTGGGCTCCCACTTCG
 GTGGCACTTGAGGAGCCCTTCAGCCCACCGCTGCACTGTGGGAGCCCTTTCTGGGCTGGCCAAG
 GCCAGAGCCGGCTCCCTCAGCTTGCAAGGAGGTGTGGAGGGAGAGGCTCAAGCAGGAACCGGGGC
 TGCGCACGGCGCTTGCGGGCCAGCTGGAAGTTCCGGGTGGGCGTGGGCTTGGCGGGCCCCGCACTC
 GGAGCAGCGGGCCAGCCCTGCCAGGCCCCGGGCAATGAGAGGCTTAGCACCCGGGCCAGCGGCTG
 CGGAGGGTGTACTGGGTGCCCCAGCAGTGCCAGCCCGCCGGCGCTGTGCTCGCTCGATTCTCAC
 TGGGCCTTAGCAGCCTTCCCGCGGGGCAGGGCTCGGGACCTGCAGCCCGCCATGCCTGAGCCTCC
 CCTCCATGGGCTCCTGTGCGGCCCCGAGCCTCCCCGACGAGCACCACCCCTGCTCCACAGCGCCC
 AGTCCCATCGACCACGCAAGGGCTGAGAAGTGCGGGCGCACGGCACCAGGACTGGCAGGCAGCTA
 CCCCTGCAGCCCTGGTGCGGAATCCACTGGGTGAAGCCAGCTGGGCTCCTGAGTCTGGTGGAGAC
 TTGGAGAACCTTTATGTCTAGCTCAGGATCGTAAATACACCAATCAGCACCCTGTGTCTAGCTC
 AGGGTCTGTGAATGCACCAATCCACACTCTGTATCTAGCTACTCTGATGGGGCCTTGGAGAACCT
 TTATGTCTAGCTCAGGGATTGTAATAACACCAATCGGCACCTCTGTATCTAGCTCAAGGTTGTAA

FIG. 5A

ACACACCAATCAACACCCTGTGTCTAGCTCAGGGTATGTGAATGCACCAATCGACAGTCTGTATC
 TGGCTACTTTTCATGGGCATCCGTGTGAAGAGACCACCAAACAGGCTTTGTGTGAGCAATAAAGCT
 TCTATCACCTGGGTGCAGGTGGGCTGAGTCCGAAAAGAGAGTCAGCGAAGGGAGATAAGGGTGGG
 GCCGTTTTATAGGATTTGGGTAGGTAAAGGAAAATTACAGTCAAAGGGGGTTTTGTCTCTGGCGG
 GCAGGAGTGGGGGGTCCGAAGGTGCTCAGTGGGGGTGCTTTTTGAGCCAGGATGAGCCAGGAAAA
 GGACTTTTACAAGGTAATGTCATCAATTAAGGCAAGGACCCGCCATTTACACCTCTTTTGTGGTG
 GAATGTCATCAGTTAAGTTGGGCGAGGGCATATTCACTTCTTTTGTGATTCTTCAGTTACTTCAG
 GCCATCTGGGCGTATATGTGCAAGTTACAGGGGATGCGATGGCTTGGCTTGGGCTCAGAGGCTTG
 ACAGCTACTCTGGTGGGGCCTTGGAGAATGTTTGTGTGACACTCTGTATCTAGTTAATCTAGTG
 GGGACGTGGAGAACCTTTGTGTCTAGCTCAGGGATTGTAAACGCACCAATCAGCGCCCTGTCAAA
 ACAGACCACTCGGCTCTACCAATCAGCAGGATGTGGGTGGGGCCAGATAAGAGAATAAAAGCAGG
 CTGCCCCGAGCCAGCAGTGGCAACGCGCACAGGTCCCTATCCACAATATGGCAGCTTTGTTCTTTT
 GCTGTTTGGGATAAATCTTGCTACTGCTCGCTTTTTGGGTCCACACTGCTTTTTATGAGCTGTAAC
 ACTCACCACGAAGGTCTGCAGCTTCACTCCTGAAGCCACTAAGACCACGAGCCCCACGGGAGGAA
 TGAACAACCTCCGGCCGCGCTGCCTTAAGAGCTATAACACTCACCGCGAAGGTCTGCAGCTTCACT
 CCTCAGCCAGCGAGACCACGAACCCACCAGAAGGAAGAACTGCGAACACATCTGAACATCAGAA
 GGAACAAACTCCAGATGCACCACCTTAAGAGCTGTAACACTCACTGCGAGGGTCCGCGGCTTCCT
 TCTTGAAGTCAGTGAGACCAAGCACTCACCAGTTTCGGACACAAGCCAGGAGTTTGAGATCAGC
 CTGGGCAACATGATGAAATGCCCTCTCTGCAAAAAAAAAAAAAAAAAATTACAAAAATTGGCGGAGCAT
 GGTGGTCCGTGCTGTGGTCCAGCTACGCGGGAGGCTAAAGTGGGAGGATCGCTTGAGCCTGGG
 AGGTGAAGACTGCAGTGAGCTGTGATTGTACCACAGCCCTCTAGGCTGGGGGACAGACTGAGACC
 CTGTTTCCCTCCGCAAAAAAATTGACAAAAGTGTAATAAGAGGTGCCTGATATGGCTAGGCGCA
 GTGGCTCATGCCTGTAATCCAGCACTTTGGGAAGCCGAGGCGGGCGGGTCACTAAGGTGAGGA
 GTGTGAGACCAGCCTGGCCAACATGGAGAAAGCCCATCTCTTCTAAAAATAACAAAATTAGCCGGC
 TGTGGGGGCGAGTGGTGGAGCATGCTGTAAATCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCA
 CTTGAACCCAGGAGGCGGCGGTTGCACTGAGCCGAGATCGTGCCATTGCACTCCACCTACTCCAG
 CCTGGGCAACAAGACCAAACTCTGTCTTAAAAAAGTGCCTGACATATAAGAGG
 TGTGCAATGCAATAGTTGCCAGGCAACATGTTAAGAATGTGGAGCTCCTGCTTCCATGTTCTCT
 GTTAAAAACCCACCCTCAAGGCCAGGTGCACTGCTATGCTTATAATCCAGCACTTTGGGAGG
 CCGAGGCGGGTGGATCACCTGAGGTGAGGAGTTCGAGACCAGCCTGACCACCAACATGGTGAAAT
 CCCACCTCTACTAAAAATAACAAATTAGATGAGCATGGTGGTGCATGCCTGTAATCCACCTACT
 TGGGAGGCTGAGGCAGGAAAATCACTAGAACCAGGGAGGCGGAGGTTGTAGTGAGCCGAGATCGT
 GCCATTGCACTCCAGCCTGAGCAATGAGCGAACTCCATCTCAAAAAACAACAACAAAAACCCA
 CTCTCTACTCCCAGGGAGCTGGGTACAGAGCTGGGCCACATCAGTGCAAGGTGCTGAGCCACAGA
 GCTAAGGCGGAGCTGCAGGACCGCGGACCAGATAACAGTGTGTGAGATCAGTGTGTGAGATCAGA
 CGTCCCTGCCATTGGTGACCAACAGGGGGCCCCAAGCACCAGAGATGGCCCCATCCAGTCACCA
 CATCCACTTCTCATCCAGAGATGTCTGTTTCTTGGCAGCTGGGGTAAATTAGGACAGAAGGTGA
 CAGTCTTGGGTGTGGTCACTGAGCTGCCCCAGGCAGGCTTGTGGCCTGTAGAAAACGTTTCAAG
 CCTAGGCCGCGGCACGGTGGCTCACGCTGTAAATCCAGCACTTTGGGAGGCGGAGGCGGGTGGAT
 CACGAGGTGAGGAGATCGTGACCATCTGGCTAACACGGTGAAACCCCGTCTCTACTAAAAATAC
 AAAAAATTGGCCGGGCATGGTGGCGGGCACCTGTAGTTCAGCTACTCGGGAGGCTGAGGCAGGA
 GAATGGCGTGAACCCGAGAGGCAGAGTTTGCAGTGAGCCGAGATCGCGCCACTGCACTCCAGCCT
 GGGCGACAGAGCAAGACTCCATCTGGAAGAGAAAAAGAAACGTTCAAGTCTGAGCCAGAGGCC
 AGGCTGTAATTCTGCTACTTACCATGACCTTGGGCAAGGCACTTCTTCCCTGGCCCACTTCCAG
 GGGTGGAAATCGACTCCAAGGTCCCTTCCAGCATTACGCTGCATGGTTCTAAGATGAGAAGATG
 GGGCAGTTTCCCTCTCTCACCCAGCCCGTGTCCACTTCAAGGTGAATGACCAGGGAACTCAGC
 TGTCCCAATCCCGCAGTTCCAAAGCCCTTGGGGACCCCTACTGTGAGGGTCTGTGCACGAGGAGGTG
 AAGGTGAGGTGAGCCAAATCGCTCGAAGGGTCTTGCTCATTCGGGACAGACATCCGGTTTTCTC
 TGGCTCTACCGGATTTAGGGGCTTTAGCCGAATGAGTCATGGGGGGCGGGGGGGTTTTCTGGGG
 GAGTTCCAGCTAATCAACTTGGGACAGGACAGCCTGGAACCTTTCGATGGTGCCTATCCAAAGTGT
 GGGGTGGGACAGCAAGACCAAGCAATGTCTTATCTCAGGTAGGGGCTCAGGAGGTCTCCAG
 ACAGGCAGCCTCCGGAGAGTTTGGGGGTAGGAATGGGAGCAACCAGGCTTCTTTTTCTCTCTT
 AGAATTTGGGGGCTTGGGGGACAGGCTTGAAGATCCCAAGGAGAGGGGCAAGGACACTCCCCC
 ACAAGTCTGCCAGAGCGAGAGAGGAGACCCCGACTCAGCTGCCACTTCCCCACAGGCCCT

FIG. 5B

CC GGCAGTCCTC

ACAGCCCTCG TTCGCTCTCG GCGCCTCCTC TGCCTGGGCT CCCACTTCGG TGGCACTTGA
 GGAGCCCTTC AGCCACCGC TGCCTGTGG GAGCCCTTT CTGGGCTGGC CAAGGCCAGA
 GCCGGCTCCC TCAGCTTGCA GGGAGGTGTG GAGGGAGAGG CTCAAGCAGG AACCGGGGCT
 GCGCACGGCG CTTGCGGGCC AGCTGGAGTT CCGGGTGGGC GTGGGCTTGG CGGGCCCCGC
 ACTCGGAGCA GCGGGCCAGC CCTGCCAGGC CCCGGGCAAT GAGAGGCTTA GCACCGGGC
 CAGCGGCTGC GGAGGGTGTA CTGGGTGCCC CAGCAGTGCC AGCCCGCCGG CGCTGTGCTC
 GCTCGATTTT TCACTGGGCC TTAGCAGCCT TCCCGCGGGG CAGGGCTCGG GACCTGCAGC
 CCGCCATGCC TGAGCCTCCC CTCCATGGGC TCCTGTGCGG CCCGAGCCTC CCCGACGAGC
 ACCACCCCTT GCTCCACAGC GCCCAGTCCC ATCGACCACG CAAGGGCTGA GAAGTGCGGG
 CGCAGGGCAC CGGACTGGC AGGCAGCTAC CCCTGCAGCC CTGGTGCGGA ATCCACTGGG
 TGAAGCCAGC TGGGCTCCTG AGTCTGGTGG AGACTTGGAG AACCTTTATG TCTAGCTCAG
 GGATCGTAAA TACACCAATC AGCACCTGT GTCTAGCTCA GGGTCTGTGA ATGCACCAAT
 CCACACTCTG TATCTAGCTA CTCTGATGGG GCCTTGGAGA ACCTTTATGT CTAGCTCAGG
 GATTGTAAAT ACACCAATCG GCACTCTGTA TCTAGCTCAA GGTGTGTAAT CACACCAATC
 AGCACCTGT GTCTAGCTCA GGGTATGTGA ATGCACCAAT CGACAGTCTG TATCTGGCTA
 CTTTCATGGG CATCCGTGTG AAGAGACCAC CAAACAGGCT TTGTGTGAGC AATAAAGCTT
 CTATCACCTG GGTGCAGGTG GGCTGAGTCC GAAAAGAGAG TCAGCGAAGG GAGATAAGGG
 TGGGGCCGTT TTATAGGATT TGGGTAGGTA AAGGAAAATT ACAGTCAAAG GGGGTTTGT
 CTCTGGCGGG CAGGAGTGGG GGGTCGCAAG GTGCTCAGTG GGGGTGCTTT TTGAGCCAGG
 ATGAGCCAGG AAAAGGACTT TCACAAGGTA ATGTCATCAA TTAAGGCAAG GACCCGCCAT
 TTACACCTCT TTTGTGGTGG AATGTCATCA GTTAAGTTGG GGCAGGGCAT ATCACTTCT
 TTTGTGATTC TTCAGTTACT TCAGGCCATC TGGGCGTATA TGTGCAAGTT ACAGGGGATG
 CGATGGCTTG GCTTGGGCTC AGAGGCTTGA CAGCTACTCT GGTGGGGCCT TGGAGAATGT

Sall

TTGTGTCGAC ACTCTGTATC TAGTTAATCT AGTGGGGACG TGGAGAACCT TTGTGTCTAG
 CTCAGGGATT GTAAACGCAC CAATCAGCGC CCTGTCAAAA CAGACCACTC GGCTCTACCA
 ATCAGCAGGA TGTGGGTGGG GCCAGATAAG AGAATAAAAG CAGGCTGCCC GAGCCAGCAG
 TGGCAACGCG CACAGGTCCC TATCCACAAT ATGGCAGCTT TGTCTTTTG CTGTTTGCGA
 TAAATCTTGC TACTGCTCGC TTTTGGGTG CACACTGCTT TTATGAGCTG TAACACTCAC
 CACGAAGGTC TGCAGTTCA CTCCTGAAGC CACTAAGACC ACGAGCCAC CGGGAGGAAT
 GAACAACCTC GGCCGCGCTG CCTTAAGAGC TATAACACTC ACCGCGAAGG TCTGCAGCTT

FIG. 6A

09845020-042701

CACTCCTCAG CCAGCGAGAC CACGAACCCA CCAGAAGGAA GAAACTGCGA ACACATCTGA
ACATCAGAAG GAACAAACTC CAGATGCACC ACCTTAAGAG CTGTAACACT CACTGCGAGG
GTCCGCGGCT TCCTTCTTGA AGTCAGTGAG ACCAAGCACT CACCAGTTTC GGACACAAGC
CCAGGAGTTT GAGATCAGCC TGGGCAACAT GATGAAATGC CCTCTCTGCA AAAAAAAAAA
AAATTACAAA AATTGGCGGA GCATGGTGGT CCGTGCCTGT GGTCCCAGCT ACGCGGGAGG
CTAAAGTGGG AGGATCGCTT GAGCCTGGGA GGTGAAGACT GCAGTGAGCT GTGATTGTAC
CACAGCCCTC TAGGCTGGGG GACAGACTGA GACCCTGTTT CCCCTCCGCA AAAAAATTGA
CAAAAGTGTA ATAAGAGGTG CCTGATATGG CTAGGCGCAG TGGCTCATGC CTGTAATCCC
AGCACTTTGG GAAGCCGAGG CGGGCGGGTC ACCTAAGGTC AGGAGTGTA GACCAGCCTG
GCCAACATGG AGAAAGCCCA TCTCTTCTAA AAATACAAAA TTAGCCGGCT GTGGGGGCAG
TGGTGAGCA TGCCTGTAAT CCCAGCTACT CAGGAGGCTG AGGCAGGAGA ATCACTTGAA
CCCAGGAGGC GGCCTTGTGA GTGAGCCGAG ATCGTGCCAT TGCACTCCAC CCACTCCAGC
CTGGGCAACA AGAGCCAAAC TCTGTCTTAA AAAAAAAAAA AAAAAGTGCC TGACATATAA
GAGGTGTGCA ATGCAATAGT TGCCAGGCAA CATGTTTAAG AATGTGGAGC TCCTGCCTTC
CATGGTCCTG TAAAAACCC ACCCTCAAGG CCAGGTGCAG TGGCTCATGC CTATAATCCC
AGCACTTTGG GAGGCCGAGG CGGGTGGATC ACCTGAGGTC AGGAGTTCGA GACCAGCCTG
ACCACCAACA TGGTGAAATC CCACCTCTAC TAAAAATACA AAATTAGATG AGCATGGTGG
TG

FIG. 6B

CCTG TAATCCCACC TACTTGGGAG GCTGAGGCAG GAAAATCACT AGAACCAGGG
 AGGCGGAGGT TGTAGTGAGC CGAGATCGTG CCATTGCACT CCAGCCTGAG CAATGAGCGA
 AACTCCATCT CAAAAAACA ACAACAAAA CCCACTCTCT ACTCCCAGGG AGCTGGGTAC
 AGAGCTGGGC CACATCAGTG CAAGGTGCTG AGCCACAGAG CTAAGGCGGA GCTGCAGGAC
 CGCGGACCAG ATAACAGTGT GTGAGATCAG TGTGTGAGAT CAGACGTCCC TGCCATTGGT
 GACCACCAGG GGGCCCCCAA GCACCAGAGA TGGCCCCATC CAGTCACCAC ATCCACTTCT
 CATCCAGAGA TGTCTGTTTC TTGGCACGCT GGGGTAAATT AGGACAGAAG GTGACAGTCT
 -1457 TGGGTGTGGT CAGTCAGACT GCCCCAGGCA GGCCTTGTGG CCTGTAGAAA ACGTTCAGGC
 -1397 CTAGGCCGGG CACGGTGGCT CACGCCTGTA ATCCCAGCAC TTTGGGAGGC CGAGGCGGGT
 -1337 GGATCACGAG GTCAGGAGAT CGTGACCATC CTGGCTAACA CGGTGAAACC CCGTCTCTAC
 -1277 TAAAAATACA AAAAATTGGC CGGGCATGGT GGCGGGCACC TGTAGTTCCA GCTACTCGGG
 -1217 AGGCTGAGGC AGGAGAATGG CGTGAACCCG AGAGGCAGAG TTTGCAGTGA GCCGAGATCG
 -1157 CGCCACTGCA CTCCAGCCTG GGCGACAGAG CAAGACTCCA TCTGGAAAAG AAAAAGAAAA
 -1097 CGTTCAGGTC TGAGCCAGAG GCCCAGGCTG TAATTCTGTC ACTTACCATG ACCTTGGGCA
 -1037 AGGCACTTCC TTCCCTGGCC CAGTTCACGG GGTTGGAATC GACTCCAAGG TCCCTTCCAG
 -977 CATTAAAGCT GCATGGTTCT AAGATGAGAA GATGGGGCAG TTTCCCTCT CTCACCCAG
 -917 CCGGTGTCCA CTTCAAGGTG AATGACCAGG GAAGTCACGT GTCCCAATCC CGCAGTTCCA
 -857 AAGCCCTTGG GGACCCTACT GTCAGGGTCG TGCACGAGGA GGTGAAGGTC AGGTGAGCCA
 -797 ATCGCCTCGA AGGGTCTTGC CTCATTGGG ACAGACATCC GGTTTCTCT GGCTCTACCC
 -737 GGATTCTAGG GGCTTTAGCC GAATGAGTCA TGGGGGGCGG GGGGGTTTCT GGGGGAGTTC
 -677 CCAGCTAATC AACTTGGGAC AGGACAGCCT GGAACCTTTCG ATGGTGCCTA TCCAAGTG

Xaml

FIG. 7